

ABSTRACT

Bioadhesive nanoparticulate compositions, comprising active agent particles and one or more cationic surface stabilizers, are described. The cationic surface stabilizers prevent aggregation of the nanoparticles and increase bioadhesion of the nanoparticles to biological substrates, such as an insect, teeth, bone, nails, chitin, feathers, scales, mucous, skin, hair, plant tissue, *etc.* The particles may consist of pharmacologically active compounds (*e.g.*, drug compounds for human or veterinary use), agricultural chemicals (pesticides, herbicides, fertilizers, and the like), cosmetic agents, consumer products (coloring agents, flavors, or fragrances), or other materials which function by interacting with biological substrates. In addition, the invention relates to methods of preparing and using such bioadhesive nanoparticulate compositions.